

Serial No.: 09/689,131
Attorney Docket No. 520219-273
Amendment

A²
process of the firefighting helmet as will be discussed below.

IN THE CLAIMS:

Amend claims 1, 17, 23, 36 and 42 such that they read as follows:

A³
1. (Amended) A method for fabricating a protective helmet, comprising the steps of:
providing a fiber-based filler;

mixing course ceramic particles into a thermoset resin, thereby providing a resin mixture;

impregnating the resin mixture into the fiber-based filler;

forming the impregnated fiber-based filler into a shape of a protective helmet;

and

curing the resin mixture.

A⁴
17. (Amended) A method for fabricating a protective helmet, comprising the steps of:

providing a male mold component;

providing a female mold component;

positioning a fiber-based filler between the male and female mold components;

mixing course ceramic particles into a thermoset resin, thereby providing a resin mixture;

positioning the resin mixture between the male and female mold components;

curing the fiber-based filler and resin mixture together by pressing the male and female mold components together for a curing time.

A⁵
23. (Amended) A method for fabricating a protective helmet, comprising the steps of:

providing a male mold component;

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providing a female mold component;
mixing course ceramic particles into a thermoset resin, thereby providing a resin mixture;

coating at least a portion of a first one of the male and female mold components with a first portion of the resin mixture;

A⁵ after the coating step, positioning a fiber-based filler over the first portion of the resin mixture in the first mold component;

after the positioning step, applying a second portion of the resin mixture over the fiber-based filler; and

curing the fiber-based sheeting and resin mixture together by pressing the male and female mold components together for a curing time.

36. (Amended) A method for fabricating a protective helmet, comprising the steps of:

providing a male mold component;
providing a female mold component;
mixing ceramic particles into a thermoset resin, thereby providing a resin mixture;

A⁶ coating at least a portion of a first one of the male and female mold components with a first portion of the resin mixture;

after the coating step, positioning a fiber-based filler over the first portion of the resin mixture in the first mold component;

after the positioning step, applying a second portion of the resin mixture over the fiber-based filler; and

curing the fiber-based filler and resin mixture together by pressing the male and female mold components together for a curing time.

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42. (Amended) A method for forming a relatively rigid, fiber composite object comprising the steps of:

providing a fiber-based filler;

mixing course ceramic particles into a thermoset resin, thereby providing a resin mixture;

impregnating the resin mixture into the fiber-based filler;

forming the impregnated fiber-based filler into a desired shape; and

curing the resin mixture to form a relatively rigid, fiber composite object.

A7
[Add the following new claims 56-59:]

56. The method of claim 1 wherein said curing step includes curing said resin mixture until said helmet is generally rigid.

A8
57. The method of claim 1 wherein said providing, mixing, impregnating, forming and curing step are carried out such that the protective helmet meets National Fire Protection Association Standards 1971-2000 top impact, acceleration impact and penetration resistance tests.

Sub B
58. The method of claim 1 wherein said ceramic particles have an average size of between about 3 microns to about 1000 microns.

59. A protective helmet formed by the steps of:

providing a fiber-based filler;

mixing course ceramic particles into a thermoset resin, thereby providing a resin mixture;